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| APPLICATION NO.                  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.      | CONFIRMATION NO. |
|----------------------------------|-------------|----------------------|--------------------------|------------------|
| 10/573,846                       | 10/31/2006  | Mikel Morvan         | 60838.000530             | 4203             |
| 21967                            | 7590        | 03/03/2009           | EXAMINER                 |                  |
| HUNTON & WILLIAMS LLP            |             |                      | BECKHARDT, LYNDSEY MARIE |                  |
| INTELLECTUAL PROPERTY DEPARTMENT |             |                      |                          |                  |
| 1900 K STREET, N.W.              |             |                      | ART UNIT                 | PAPER NUMBER     |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/573,846             | MORVAN ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | LYNDSEY SHAAC          | 4121                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 January 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 18-34 is/are pending in the application.  
 4a) Of the above claim(s) 22-24 and 29 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 18-21, 25-28 and 30-34 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.                                                         | 6) <input type="checkbox"/> Other: _____ .                        |

## DETAILED ACTION

Claims 18-21, 25-28 and 30-34 are currently pending.

### ***Priority***

This application claims priority to Provisional application 60/506,788.

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 37 CFR 1.78 as follows: The provisional application, 60/506,788 is filed in a Non-English language, and a certified English-language translation has not been filed in the provisional application or the instant application. Notice requiring the applicant to file an English translation of the non-English provisional application was sent on 11/25/2003.

This notice stated:

37 CFR 1.780)(5) states in part:

(iv) If the prior-filed provisional application was filed in a language other than English and an English language translation of the prior filed provisional application and a statement that the translation is accurate were not previously filed in the prior-filed provisional application or the later-filed nonprovisional application, applicant will be notified and given a period of time within which to file an English-language translation of the non-English-language prior filed provisional application and a statement that the translation is accurate. In a pending nonprovisional application, failure to timely reply to such a notice will result in abandonment of the application.

The effective filing date for claims 18-34 is 09/29/2004.

It is noted that this application appears to claim subject matter disclosed in prior Application No. 60/506,788, filed 09/29/2003. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an

application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge

under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

***Oath/Declaration***

It is noted that the filing date of the provisional application claimed in the Oath, 60/506,788 is improperly stated as 09/29/2004, a date inconsistent with PTO records; PTO records indicate the correct filing date of application 60/506,788 is 09/29/2003.

***Election/Restrictions***

1. Applicant's election of a) Direct Emulsion for the Type of Emulsion, b) 5-aminoisophthalic acid for the Core compound with groups A, R, B and r, c) e-caprolactam for core compound with groups A', R' and B', d) 1,3,5-benzentricarboxylic acid for Core Monomer, e) Jeffamine for Chain Limiting monomer and f) No further chain limiting monomer for other chain limiting monomer in the reply filed on 1/15/2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 22-24 and 29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 1/15/2009.

***Information Disclosure Statement***

The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other

information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Objections***

3. Applicant is advised that should claims 30 or 31 be found allowable, claims 33 or 34 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim 30 and 33 are substantial duplicates because they both claim a formulation of a cosmetic product, a detergent product, paint or a coating that contains an emulsion.

Claim 31 and claim 34 are substantial duplicates because they both claim a formulation where the cosmetic product is a skin or hair care product.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 is a dependent claim 'as claimed in claim 26'. There is insufficient antecedent basis for this dependency in the claim since claim 26 makes no mention of A', A'', B' or B'' functional groups. The claim should be corrected to say 'as claimed in claim 27'.

5. Claims 33 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 requires 3 components of an emulsion and a fourth component of a phase being aqueous. Claim 33 recites the dendritic polymer as defined by claims 18. It is unclear whether all components of the emulsion recited in claim 18 are required or only the dendritic polymer. Claim 34 is dependent off of claim 33.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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7. Claims 18-21 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by US 7,001,580 (application date: 12/31/2002).

8. The '580 patent teaches stabilized emulsions comprising a continuous phase and a dispersed phase are rendered by incorporation of an effective amount of surface-modified organic molecules into the continuous phase of the composition without reducing surface tension at the continuous dispersed phase interface (column 1, lines 43-47). Emulsions may be oil-in water or water-in-oil emulsions or multiple emulsions (column 1, lines 59-60). The surface-modified organic molecules stabilize emulsions without lowering the surface tension at the interface between the dispersed and continuous phases (column 2, lines 1-5). The surface-modified organic molecules are substantially soluble in the continuous phase or soluble derivative of a precursor molecule may be prepared, for example by alkylation (column 2, lines 13-17). Specific examples of useful surface-modified organic molecules include alkylated polyamidoamine (PAMAM) dendrimers (column 2, lines 28-32). Examples of the continuous phase include water, moisturizing oils (e.g. mineral and jojoba oils) and silicone oils (column 2, line 61 and 65-66). Each phase may also contain other dissolved or soluble compounds or components which are added to achieve desired effect, for example, salts, drugs, dyes, flame retardants and the like (column 3, lines 17-21). The emulsions of the invention may be useful in foods, cosmetics, pharmaceuticals and the like (column 3, lines 29-30). The '580 patent also teaches that suitable liquid dispersed phases include water and all of the organic materials listed above for use as a continuous phase (column 3, lines 6-9).

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9. An oil in water emulsion as stated above is recognized in the art as being a two phase direct emulsion with oil droplets being suspended in water. The surface modified organic molecules, which include dendrimers, are taught to be soluble in the continuous phase. The PAMAM dendrimers, which contain hydrophobic groups, are also taught as being modified with alky groups, which are hydrophilic. This reads on claims 18-21. The emulsion being a cosmetic product with other compounds such as salts, dyes and drugs read on a formulation of a cosmetic product as recited in claim 30.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 18-21 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 2000/68298 (Publication date: 11/16/2000), henceforth referred to as Bouquerel, as evidenced by Merriam-Webster Online Dictionary. For ease of examination, the Examiner relied upon US Patent 6,872,800 as an equivalent English translation of the French WO 2000/68298 publication. All citations henceforth to Bouquerel are locations in the US Patent.

14. Bouquerel teaches a hyperbranched polymer to be also known as a dendritic polymer (column 1, lines 5-6). The three dimensional network of multifunctional monomers have reacted with each other by condensation of the amidation type (column 1, lines 8-10). Also taught is a hyperbranched copolyamide of the type obtained by reaction between, in particular, multifunctional monomers, for example trifunctional and difunctional monomers, each of the monomers bearing at least two different reactive polymerization functions (column 1, lines 10-15). Bouquerel teaches a preferred “core” monomer as being 1,3,5-benzenetricarboxylic acid (column 6, lines 8-11). Monomer (I) is advantageously chosen from a group including 5-aminoisophthalic acid (column 5, lines 26-28). The difunctional monomer of formula (II) is advantageously chosen from a group including  $\epsilon$ -caprolactam (column 5, lines 36-38). Bouquerel also teaches that the

hyperbranched copolyamide can be functionalized (column 6, lines 52-54). Monomers (IV) are the "chain limiting" monofunctional monomers located at the periphery of the dendrimer (column 5, lines 17-18), and can optionally bear the functionality (column 6, lines 58-59). A hydrophilic functionalization may be provided by polyoxyalkylene radicals coming from amino-polyoxyalkylenes of the JEFFAMINE® type (column 7, lines 60-64). It is also pointed out that hyperbranched copolyamides according to the invention can be obtained by a process characterized in that it consist essentially in carrying out a polycondensation between monomers (I) and monomers (II) which react together and optionally with monomers (III) and/or (IV); this taking place under suitable temperature and pressure conditions (column 6, lines 65-67 and column 7, lines 1-3).

This is applicable to claims 25-28.

15. Bouquerel also teaches the use of the hyperbranched copolyamides according to the invention as having the power to stabilize dispersions, preferably aqueous dispersions, of organic and inorganic products (column 9, lines 25-27), which is applicable to claim 19. The hyperbranched copolyamides are functionalized such that they are soluble or dispersible in the liquid medium of the dispersion and in particular in water as regards to aqueous dispersions (column 9, lines 30-33). The use of functionalized hyperbranched copolyamide as defined above as a stabilizer for a dispersion, preferable an aqueous dispersion, of inorganic and/or organic products.

Merriam-Webster teaches emulsion as being a system consisting of a liquid dispersed with or without an emulsifier in an immiscible liquid usually in droplets of larger than colloidal size (Merriam-Webster). This teaches the equivalence of emulsion and

dispersion in the art. The preferable aqueous dispersion of organic products taught above is applicable to oil in water emulsion, which comprises water as the outer phase with oil dispersed within it. This is applicable to claim 18. The carboxylic acid functional groups contained in the monomers taught above, and the hydrophilic functionalization of the chain limiting monomer are applicable to claim 20, where the dendritic polymer contains hydrophobic and hydrophilic groups. An oil-in-water emulsion, as taught above, is a direct emulsion with the water phase being the outside phase. The hydrophobic groups that are taught on the dendrimer above are pertaining to chain limiting monomer IV. The chain limiting monomer would be on the chain ends, therefore this reads on claim 21. This is applicable to claims 18-21.

16. While Bouquerel teaches all of the elements of claims 18-21 and 25-28, it does not teach all of the elements in a single composition. However, Bouquerel does provide the motivation to combine any combination of these elements into one composition by teaching that multifunctional monomers (I), difunctional monomers (II), multifunctional or monofunctional of ‘core’ type (III) and/or chain limiting monomers (IV) can be combined to make a hyperbranched monomer (column 4, lines 34-39). It would therefore be *prima facie* obvious to one of ordinary skill in the art at the time of the invention to combine a monomer from each formula group listed above to make a hyperbranched polymer.

17. Claims 18 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7,001,580 (application date: 12/31/2002) in view of Jojoba Hair Treatment/Conditioner (Date Available: 11/27/2001, Internet Archive Wayback

Machine), and Emagesbeauty.com (copyright: 1996), hereafter referred to as hair care tips.

18. The '580 patent was used to reject claim 18 in the above 102 (e) rejection. An emulsion with an inner, an outer phase and an emulsifying dendritic polymer with one of the phases being aqueous was taught. Examples of the continuous phase include water, moisturizing oils (e.g. mineral and jojoba oils) and silicone oils (column 2, line 61 and 65-66) was also taught, as well as the emulsion being using in a cosmetic product (column 3, lines 29-30). Each phase may also contain other dissolved or soluble compounds or components which are added to achieve desired effect, for example, salts, drugs, dyes (column 3, lines 17-21).

19. The '580 patent, however, does not teach the cosmetic composition being a skin or hair care product.

20. Jojoba hair Treatment/Conditioner teaches the use of Jojoba oil for use in a hair treatment to make hair very shiny, soft and less frizzy (bottom of paragraph 1).

21. Hair Care Tips teaches the use of a silicone oil product made for daily use on hair to treat frizzyness (For Frizzy Hair paragraph).

22. While the '580 does not explicitly teach the use of the cosmetic product for use in hair care, compositions commonly used in hair care emulsions were taught. Jojoba Oil and Silicone oil are commonly used in hair care compositions to treat frizzy hair. Therefore it would have been *prima facie* obvious to one skilled in the art at the time of the invention to use the cosmetic composition taught by the '580 patent using commonly known frizzy hair treating ingredients as taught by Jojoba hair Treatment/Conditioner

and Hair Care Tips as a hair care product for treatment of frizzy hair. This is applicable to claims 30-34.

***Conclusion***

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LYNDSEY SHAAK whose telephone number is (571)270-7676. The examiner can normally be reached on Monday to Friday 8:00 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Nolan can be reached on 571-272-0847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Patrick J. Nolan/  
Supervisory Patent Examiner, Art Unit 4121